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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,782	09/01/2000	Paul R. Marshall	PHB 34,386	5639

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EXAMINER	
CHOW, CHARLES CHIANG	
ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/653,782	MARSHALL ET AL.	
	Examiner	Art Unit	
	Charles Chow	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Office Action for Amendment
Received on 7/29/2004

1. Withdrawn objection to drawings for Fig. 2-3 because the corrected drawings received on 7/29/2004 are acceptable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 8, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besharat et al. (US 6,219,540 B1) in view of Deluca et al. (US 5,144,296).

Regarding **claim 1**, Besharat et al. ("Besharat") teaches a method of operating a receiver (104 for signal from transmitter 902, col. 2, lines 35-45, abstract, figure in cover page). Besharat teaches the energizing the receiver, detecting the presence of a carrier signal (quality detector 154 for detecting out-of-range, in-range, signal for controlling the power to receiver 104, quality indicator 154, Fig. 1, abstract, col. 6, lines 19-41; col. 12, lines 1-8; the presence of acceptable transmission, col. 7, lines 36-38). the de-energizing the receiver if the carrier signal is not detected (the out-of-range detection, causing suspending of power supply to receiver 104, abstract; the absence of acceptable transmission, to generate out or range signal, col. 7, lines 38-42; col. 9, lines 34-36; col. 11, lines 18-20; the out-of-range detection and disable power using power control means 156 in col. 2, line 63 to col. 3, line 17; the loss of signal is out-of-range (col. 9, lines 1-5 and col. 10, lines 16-19, as the carrier is not detected), the maintaining energisation of the receiver if the carrier signal is detected (the

maintaining power supply to receiver 104 to enable in-range detection signal transmission; the in-range detection, to stop timer OOR 138, and to enable power supply to receiver 104 (col. 2, line 6 to col. 3, line 17).

Besharat fails to teach the demodulating the detected carrier signal, assessing the quality of the demodulated signal, de-energizing the receiver if the quality of the demodulated signal is not acceptable, decoding the demodulated signal if the signal quality is acceptable. However, Deluca et al. (Deluca) teaches these claimed features in two stages scheme, the demodulating, measuring of signal strength, carrier signal, to generate quality indication signal.based on the predetermined carrier-to-noise radio, such as +6 dB (col. 7, col. 32-37, carrier, bit error rate quality in Fig. 2), when carrier power is over + 6dB then to generate good signal quality signal. In Fig. 6, step 622 for counting of bit error rate for quality, after measuring RSSI in step 614, the accessing quality in step 626 to check if the quality, bit error count is at maximum error, if quality is at maximum error, the microcomputer conserves, terminates, power supply to receiver in step 618, for the de-energizing the receiver, if the quality of the demodulated signal is not acceptable, when the quality is not greater than maximum error counts, step 626, quality is acceptable, decode the address of the demodulated signal in step 632. Deluca teaches improved technique for efficiently, adaptively controlling the battery power for battery power saving (col. 1, lines 6-11, col. 2, lines 8-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Besharat, and to include Deluca's adaptive, efficiently, battery power saving, such that receiver could reduce the battery power consumption, by adaptively, efficiently, suspending the battery power to receiver.

Regarding **claim 2,** Besharat has shown above for the detecting of the presence of a carrier which is in-range (col. 4, line 66 to col. 2, line 7) for the in-range signal is the detected acceptable signal (col. 7, lines 20-26).

Regarding **cliam3,** Deluca teaches measuring signal quality as a measure for determining if a signal is decodable (battery saving means for suspending supply power in response to quality detecting means, col. 13, line 62 to col. 14, line 20).

Regarding **claim 4,** Besharat teaches a communications system comprising a primary station (transmitter 902) having for transmitting a signal and at least one secondary station (100) having a receiver (104) for receiving signals from primary station (col. 2, lines 35-45, Fig. 9), the receiver comprising receiving means (antenna 102, signal quality detector 154, processor 106, Fig. 1) for detecting quality. Besharat has shown above the power control means (156) for de-energizing the receiver if the presence of the signal is not detected (the out-of-range detection and disable power using power control means 156 in col. 2, line 63 to col. 3, line 17). Beshart fails to teach the if the presence of the signal is detected and the detected signal is not decodable, for de-energising the receiver. However, Deluca teaches the if the presence of the signal is detected and the detected signal is not decodable, for de-energising the receiver (the decoding means for decoding the received address code works, the battery saving means for responsive to the decoding means for suspending the supply of power to the receiving means, col. 13, line 62 to col. 14, line 20; the battery saving means is further responsive to said decoding means for maintaining the supply of power to said receiving means upon the detection by said distinguishing means of received message code words, col. 14, lines 21-26; the strong signal, weak signal in abstract). Deluca teaches improved

technique for efficiently, adaptively controlling the battery power for battery power saving (col. 1, lines 6-11, col. 2, lines 8-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Besharat, and to include Deluca's adaptive, efficiently, battery power saving, such that receiver could reduce the battery power consumption, by adaptively, efficiently, suspending the battery power to receiver.

Regarding **claim 5**, Deluca teaches the means for determining RSSI (404, Fig. 4) is coupled to the signal receiving means (402).

Regarding **claim 8**, Besharat teaches a receiver circuit operable to produce a received signal from a channel (abstract), a demodulator circuit coupled to the receiver circuit (106), the demodulator operable to produce a demodulated signal from the received signal (, col. 2, lines 48-62), a signal quality indicator circuit (154) coupled to the demodulator circuit (106), a microprocessor (signal processor 106) coupled to the receiver (104), as shown in claim 1 above. Besharat fails to teach other claimed features. However, Deluca teaches a decoder circuit (412) coupled to the to the demodulator circuit (inside receiving means 402, for removing modulation to output 406), the received signal strength indicator circuit (404), and the decoder circuit (412); wherein the microprocessor (microcomputer, col. 8, lines 34-36, col. 10, lines 28-53) is operable to energize and de-energize the receiver circuit (battery saving means, 422); determine the presence of a carrier (strong, weak signal, abstract) with a carrier detect false rate (bit error rate in col. 7, line 44), based, at least in part, on the power in the channel, and to determine an acceptable signal quality with a signal quality false rate (bit error rate), based, at least in part, on an output of the signal quality indicator circuit (the quality detecting means in col. 14, lines 1-6); wherein the microprocessor (MC68HC05) is

operable to energize the receiver circuit for a first period of time (col. 5, line 63 to col. 6, line 7), and if the carrier is determined to be present, to then maintain the receiver in the energized state until a determination is made as to whether acceptable signal quality has been obtained (time interval 336 to enable decoder, col. 5, lines 63 to col. 6, line 7; the hard bit error quality, during time interval 338, 340, 344,350 in col. 6, lines 25-62) de-energize the receiver if the carrier is determined to be present and the signal quality is not acceptable (based on the error count to generate first control signal to suspend the supply of power to receiver, col. 17, line 1 to col. 18, line 4). Deluca teaches improved technique for efficiently, adaptively controlling the battery power for battery power saving (col. 1, lines 6-11, col. 2, lines 8-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Besharat, and to include Deluca's adaptive, efficiently, battery power saving, such that receiver could reduce the battery power consumption, by adaptively, efficiently, suspending the battery power to receiver.

Regarding **claim 10**, Besharat teaches the microprocessor is operable to de-energize the receiver circuit if the carrier is determined to not be present, without performing a signal quality determination (the out-of-range detection, causing suspending of power supply to receiver 104, abstract; the absence of acceptable transmission, to generate out or range signal, col. 7, lines 38-42; col. 9, lines 34-36; col. 11, lines 18-20; the out-of-range detection and disable power using power control means 156 in col. 2, line 63 to col. 3, line 17).

Regarding **claim 11**, Besharat teaches a metering unit (signal quality detector 154) coupled to the microprocessor (108, Fig. 1). Deluca teaches an decoder circuit (address decoder 412) coupled to the microprocessor ((MC68HC05, col. 8, lines 34-36). Regarding a radio

transmitter circuit coupled to the encoder circuit, it is well known in the technology for coupling the encoder to a radio transmitter.

3. Applicant's arguments filed 7/29/2004 have been fully considered but they are not persuasive.

Regarding applicant's arguments with respect to claims 1-5, 8, 10-11 based on the no teachings for the two-stage scheme for the demodulating the detected carrier signal, assessing the quality of the demodulated signal, de-energizing the receiver if the quality of the demodulated signal is not acceptable, decoding the demodulated signal if the signal quality is acceptable, Deluca-'296 does teaches these claimed features in two stages scheme, the demodulating, measuring of signal strength, carrier signal, to generate quality indication signal based on the predetermined carrier-to-noise radio, such as +6 dB (col. 7, col. 32-37, carrier, bit error rate quality in Fig. 2), when carrier power is over + 6dB then to generate good signal quality signal. In Fig. 6, step 622 for counting of bit error rate for quality, after measuring RSSI in step 614, the accessing quality in step 626 to check if the quality, bit error count is at maximum error, if quality is at maximum error, the microcomputer conserves, terminates, power supply to receiver in step 618, for the de-energizing the receiver, if the quality of the demodulated signal is not acceptable, when the quality is not greater than

maximum error counts, step 626, quality is acceptable, decode the address of the demodulated signal in step 632.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

December 13, 2004.

EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600